

REMARKS

Claims 17-33 and 36-39 remain pending in the application. Claims 1-16 are withdrawn from consideration as a result of the restriction requirement. Claims 34 and 35 have been canceled. Claims 36-39 have been newly added. Claims 17, 22, 24, 25, and 31-33 have been amended. Entry and consideration of this amendment is respectfully requested. No new matter is believed to have been introduced by this amendment.

Objections to the Drawings

The Examiner objected to the drawings because the reference numbers "1" and "2" do not correspond to their usage in the Specification and in Figure 1. Accordingly, Applicant has amended Figures 6 and 7 by reversing numerals "1" and "2" to correspond with their usage in the Specification and Figure 1. Therefore, Applicant requests that this objection be withdrawn.

Rejections under 35 U.S.C. §112

In the Office Action, claim 22 is rejected under 35 U.S.C. §112, second paragraph as being allegedly indefinite. Accordingly, Applicant has amended claim 22 to clarify the language in the claim. Withdrawal of this rejection is respectfully requested.

EP 1 158 361 A1

Claims 17-34 are rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by European Patent Application Publication EP 1 158 361 A1. Applicant respectfully submits that this publication is a reference under 35 U.S.C. § 102(a), and not 35 U.S.C. § 102(e).

EP 1 158 361 A1 has a publication date of November 28, 2001, which is later than the December 28, 2000 priority date of the present application. Applicant is submitting herewith an English translation of the priority document, Japanese Application No. 2000-401228. It is believed that by perfecting the claim to priority, EP 1 158 361 A1 should be eliminated as prior art. Accordingly, Applicant requests that this rejection be withdrawn.

Shirasaki and Shiraishi

Claims 17-19, 26-30, and 32 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent Application Publication No. 2001/0004508 to Shirasaki ("Shirasaki") in view of U.S. Patent No. 6,627,365 to Shiraishi ("Shiraishi"). Applicant respectfully traverses the rejection for the following reasons.

Independent claim 17 is directed to a projection exposure apparatus. This apparatus includes a mask stage, an illumination optical system, and a projection optical system. As recited in claim 17, the mask stage includes a transparent member having an aspheric surface. Independent claim 32 is directed to a projection exposure apparatus for projecting a pattern formed on a surface of a mask. As recited in claim 32, the mask includes a transparent member and a correction part having an aspheric surface.

The aspheric surfaces, as recited in amended claims 17 and 32 are not disclosed by Shirasaki and Shiraishi. Shirasaki involves techniques for maintaining parallelism between a mask surface and a membrane surface of a pellicle to reduce distortions. For instance, Figures 2-5 of Shirasaki show parts 9 and 10 that are used to make a membrane surface parallel with a mask. Also, Shirasaki discloses making a surface of the membrane convex so that the

membrane will become flattened when attached to the pellicle through gravity, stress from the pellicle frame, or pressure. However, these techniques do not involve the membrane surface being aspheric.

Shiraishi involves photomasks, each having a pattern surface and a substrate. Shiraishi discloses at columns 9 and 10 that a projection optical system may correct aberrations caused by the substrate. For instance, at column 9, lines 43-63, Shiraishi discloses lenses 16 and 17 that may be adjusted by moving mechanism 18A to correct aberrations. However, in Shiraishi, this correction feature is not part of a mask stage as recited in claim 17, or a mask as recited in claim 32. Instead, this correction feature is part of a separate projection optical system. Accordingly, claims 17 and 32, as well as their respective dependent claims, are distinguishable from Shirasaki and Shiraishi.

Claims 17-24, 26-30, and 32 are rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Shiraishi. For same reasons as discussed above, it is believed that claims 17-24, 26-30, and 32 are distinguishable from Shiraishi.

Accordingly, Applicant requests that these rejections be withdrawn.

New Claims

New claims 36-39 are directed to device fabrication methods. Applicants assert that these claims are patentable over the reference applied by the Examiner.

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CONCLUSION

Applicant respectfully submits that all of the stated grounds of rejection have been properly traversed accommodated or rendered moot. Thus, Applicant believes that the present application is in condition for allowance, and as such, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections, and allowance of this application.

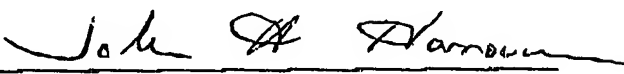
AUTHORIZATIONS

This paper is timely filed. Thus, no fee is due by this filing. However, the Commissioner is hereby authorized to charge any additional fees which may be required for this filing, or credit any overpayment to Deposit Account No. 13-4503, Order No. 1232-4807

Respectfully submitted,
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